

# Communication Disorders in Educational and Medical Settings

*An Introduction for Speech-Language Pathologists,  
Educators, and Health Professionals*

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# CONTENTS

**Preface** ..... **xiii**

**CHAPTER 1**   **Communication Disorders in Educational and Medical Settings: Background, Legal/Administrative Issues, Professional Roles, and Service Delivery Models** ..... **1**

    Background Information: The Communication Disorders Professional ..... 1

    Work Settings ..... 2

    The Professions of Audiology and Speech-Language Pathology ..... 5

    Credentialing in Audiology and Speech-Language Pathology ..... 7

    The Influence of Professional Organizations ..... 8

    Caseload Issues for Speech-Language Pathologists in Educational and Medical Settings ..... 8

*Educational Settings* ..... 8

*Medical Settings* ..... 11

    Legal and Administrative Issues in Educational and Medical Settings ..... 11

*Educational Settings: Public Laws Affecting Students with Communication Disorders* ..... 11

*Clinical/Medical Settings* ..... 14

    The Role of the Speech-Language Pathologist in the School System ..... 15

    Service Delivery Models ..... 20

*Multidisciplinary, Interdisciplinary, and Transdisciplinary Team Models* ..... 20

	<i>Types of Service Delivery Offered by the Speech-Language Pathologist</i> . . . . .	23
	The Role of the Classroom Teacher in Identification, Assessment, and Treatment . . . . .	27
	The Role of the Speech-Language Pathologist in Medical Settings . . . . .	29
	The Role of Healthcare Professionals in Identification, Assessment, and Treatment . . . . .	30
	Terms to Know . . . . .	31
	Study Questions . . . . .	31
	Bibliography . . . . .	32
<b>CHAPTER 2</b>	<b>Normal Aspects of Communication</b> . . . . .	<b>35</b>
	Communication . . . . .	35
	Language . . . . .	36
	Speech . . . . .	40
	<i>Respiration</i> . . . . .	40
	<i>Phonation</i> . . . . .	41
	<i>Resonance</i> . . . . .	43
	<i>Articulation</i> . . . . .	45
	<i>Cerebration</i> . . . . .	48
	Hearing . . . . .	49
	<i>The Outer Ear</i> . . . . .	51
	<i>The Middle Ear</i> . . . . .	51
	<i>The Inner Ear</i> . . . . .	52
	Terms to Know . . . . .	53
	Study Questions . . . . .	54
	Bibliography . . . . .	55
<b>CHAPTER 3</b>	<b>Communication Development Through the Life Span</b> . . . . .	<b>57</b>
	Language Development in Childhood . . . . .	58
	<i>Early Communicative Development: Gestures and Language</i> . . . . .	58
	<i>Early Development of the Language Framework</i> . . . . .	64
	<i>Communicative Refinement After the Early Multiword Period: Five Stages of Development</i> . . . . .	66
	Development of the Speech Sound System . . . . .	68
	Phonological Awareness . . . . .	73
	Hearing Ability Across the Life Span . . . . .	74
	Changes in Voice Across the Life Span . . . . .	75
	<i>Language in the Normal Aging Adult</i> . . . . .	76
	<i>Fluency over the Life Span</i> . . . . .	78

Terms to Know .....	79
Study Questions .....	79
Bibliography .....	80
<b>CHAPTER 4 Speech Sound Disorders .....</b>	<b>83</b>
Background Information .....	83
<i>Nature of the Problem</i> .....	83
<i>Developmental Aspects</i> .....	83
<i>Prevalence</i> .....	85
Causes of Speech Sound Disorders .....	86
<i>Organic Factors</i> .....	86
<i>Functional Disorders</i> .....	88
In Educational Settings .....	90
<i>Case Examples</i> .....	90
<i>Assessment of Speech Sound Disorders in</i> <i>Educational Settings</i> .....	91
<i>How Teachers Can Help in Assessment</i> .....	95
Treatment of Speech Sound Disorders in Educational Settings . . .	95
<i>Direct Treatment Techniques</i> .....	96
<i>How Teachers and Parents Can Assist in</i> <i>Direct Treatment Approaches</i> .....	101
<i>Indirect Treatment of Speech Sound Disorders</i> .....	102
<i>How Teachers Can Assist in Indirect Treatment</i> <i>Approaches</i> .....	103
In Medical Settings .....	104
<i>Medically Fragile Children</i> .....	104
<i>Structural Deficits Resulting from Oral Surgery</i> .....	106
Terms to Know .....	111
Study Questions .....	112
Bibliography .....	112
<b>CHAPTER 5 Children with Limited Language .....</b>	<b>119</b>
General Overview of Limited Language Disorders: Nature, Causation, Symptoms, and Related Problems .....	121
<i>Two Major Divisions of Language Impairment</i> .....	123
<i>Who Encounters Children with Limited Language?</i> .....	124
<i>The Symptoms Seen in Children with Limited Language</i> . . . .	125
<i>Children with Limited Language Who Have Different “Labels”</i> . . .	126
General Overview of the Assessment Process in Cases of Limited Language (Common to All Settings) .....	129
<i>Evaluation of Children with Limited Language Abilities</i> . . . .	129

<i>Biological</i> . . . . .	131
<i>Access to a Language Model</i> . . . . .	132
<i>Cognitive Ability</i> . . . . .	133
<i>Intent to Communicate</i> . . . . .	134
<i>Social Abilities</i> . . . . .	135
<i>Evaluation of Verbal/Nonverbal Communication</i> . . . . .	135
<i>The Single-Word Child</i> . . . . .	136
<i>The Early Multiword Child</i> . . . . .	136
General Overview of Direct and Indirect Treatment for	
Children with Limited Language (Common to All Settings) . . .	137
<i>Structured Versus Naturalistic Treatment</i> . . . . .	137
<i>Work on the BACIS of Language</i> . . . . .	139
<i>Verbal and Augmentative Modes in Treatment</i> . . . . .	140
<i>Determining the Success of Treatment</i> . . . . .	141
Assessment and Treatment of Limited Language Cases in	
Medical/Community Clinic Settings . . . . .	142
Assessment and Treatment of Limited Language Cases in	
Educational Settings . . . . .	147
Conclusion . . . . .	147
Terms to Know . . . . .	148
Study Questions . . . . .	148
Bibliography . . . . .	148
Appendix 5–1 Creating Communicative Opportunities . . . . .	151
Appendix 5–2 Characteristics of a Good Language Model	
and Interaction. . . . .	153
Appendix 5–3 Suggestions by Lucas for Naturalistic Language	
Treatment . . . . .	155
Appendix 5–4 Incidental Teaching Suggestions . . . . .	157
Appendix 5–5 Language Stimulation Techniques . . . . .	159
Appendix 5–6 Incorporation of Language Goals in Classroom	
and Home Activities . . . . .	161
Appendix 5–7 Social Aspects Related to Communication. . . . .	163
Appendix 5–8 Cognitive Skills Related to	
Language Development . . . . .	165
<b>CHAPTER 6 School-Age and Adolescent Language Disorders . . . . .</b>	<b>169</b>
Background Information . . . . .	169
<i>Symptoms Reported in Students with Language Problems</i> . . . . .	171
Setting and the Older Child with Language Disorders . . . . .	172
Assessment Issues . . . . .	174

*The Importance of Teacher Referral* . . . . . 174  
*Evaluation* . . . . . 175  
 Direct and Indirect Treatment for Students with  
     Language Impairment . . . . . 177  
         *Four General Guidelines in Designing Treatment* . . . . . 178  
         *The Information to Be Communicated.* . . . . . 180  
         *Modifying the Presentation* . . . . . 180  
         *Modifying the Environment.* . . . . . 181  
         *Modifying the Response* . . . . . 181  
         *Modifying Learning Strategies* . . . . . 182  
         *Which Type of Treatment Format Is Best?* . . . . . 183  
 Terms to Know . . . . . 184  
 Study Questions . . . . . 184  
 Bibliography . . . . . 184

**CHAPTER 7 An Overview of Multicultural Issues in**

**Communication Disorders** . . . . . **187**  
 Population and Professional Trends . . . . . 187  
 Bilingualism and Dialectal Variation . . . . . 188  
 Perceptions of Disability. . . . . 190  
 Client–Clinician Relationships (Interviewing/Counseling). . . . . 190  
 Incidence/Prevalence. . . . . 191  
 Assessment Issues . . . . . 191  
 Treatment Issues. . . . . 192  
 Dialects. . . . . 192  
 The Difference–Deficit Issue . . . . . 196  
 Ethnicity, Race, and First Language Community. . . . . 197  
 Regional Variations. . . . . 198  
 Social Class Variations . . . . . 199  
 Peer Group Identification. . . . . 199  
 Communicative Context . . . . . 199  
 The Dialectal Continuum . . . . . 200  
 Specific Differences Between African American English and  
     Standard English . . . . . 201  
 The Effects of Dialectal Variation on the Student . . . . . 204  
 How Can the Classroom Teacher Deal with the Dialect Issue? . . . . 206  
 Dialects, Teachers, and the Speech-Language Pathologist. . . . . 208  
 Terms to Know. . . . . 211  
 Study Questions. . . . . 211  
 Bibliography. . . . . 212

<b>CHAPTER 8</b>	<b>Fluency Disorders</b>	<b>217</b>
	The Incidence and Prevalence of Stuttering	219
	Causation and Development of Stuttering	220
	<i>Early Signs of Concern</i>	221
	<i>Developmental Phases</i>	222
	Assessment Issues	224
	<i>Differential Diagnosis</i>	225
	<i>Judging Severity</i>	227
	<i>Common Avoidance and Concealment Techniques</i>	228
	<i>Information the Teacher Can Provide</i>	229
	Therapeutic Principles	230
	<i>Treatment Options for the Young Student</i>	230
	<i>Treatment for the Older Student</i>	232
	<i>Ways Teachers Can Assist in the Intervention Program</i>	233
	<i>Teacher Tips for Classroom Management</i>	236
	Adult Assessment and Treatment Issues	238
	Other Fluency Disorders	239
	Terms to Know	242
	Study Questions	242
	Bibliography	242
<b>CHAPTER 9</b>	<b>Voice Disorders and Altered Methods of Breathing</b>	<b>247</b>
	The Nature of Voice Production and Voice Disorders	248
	Causations of Common Vocal Disorders	249
	<i>Nodules</i>	250
	<i>Edema</i>	254
	<i>Papilloma</i>	255
	<i>Select Adult Voice Disorders</i>	255
	Voice Assessment and Vocal Parameters	256
	<i>Pitch</i>	257
	<i>Loudness</i>	257
	<i>Quality</i>	258
	<i>Breath Features</i>	258
	<i>Rate/Rhythm</i>	258
	<i>Instrumentation</i>	258
	Voice Treatment Options	259
	<i>Vocal Hygiene Programs</i>	259
	<i>Voice Treatment</i>	261
	<i>Suggestions for Teachers</i>	262
	<i>Further Comments Regarding Adults in Medical Settings</i>	263



	<i>Tips for Allied Health Professionals Concerning Adult Patients with Voice Disorders</i> . . . . .	265
	Background Information on Altered Methods of Breathing . . . . .	265
	<i>Tracheostomized Persons</i> . . . . .	265
	<i>Laryngectomized Persons</i> . . . . .	267
	<i>Tips for Working with Persons Who Have Altered Methods of Breathing</i> . . . . .	268
	Terms to Know . . . . .	269
	Study Questions . . . . .	269
	Bibliography . . . . .	270
	Appendix 9–1 Selected Vocal Hygiene Programs . . . . .	272
<b>CHAPTER 10</b>	<b>Hearing Loss</b> . . . . .	<b>275</b>
	Background Information . . . . .	275
	<i>Nature of the Problem</i> . . . . .	275
	<i>Causes of Hearing Loss</i> . . . . .	277
	<i>Communication Problems Associated with Hearing Loss</i> . . . . .	280
	In Medical Settings . . . . .	282
	<i>Assessment in Medical Settings</i> . . . . .	282
	<i>Intervention in Medical Settings</i> . . . . .	286
	In Educational Settings . . . . .	292
	<i>Case Example</i> . . . . .	293
	<i>Specialists in Educational Settings</i> . . . . .	294
	<i>Assessment in Educational Settings</i> . . . . .	295
	<i>How Teachers Can Help in Assessment</i> . . . . .	296
	<i>Intervention in Educational Settings</i> . . . . .	296
	<i>Suggestions for Teachers of Students with Hearing Loss</i> . . . . .	303
	Auditory Processing Disorder . . . . .	304
	Terms to Know . . . . .	306
	Study Questions . . . . .	307
	Bibliography . . . . .	307
<b>CHAPTER 11</b>	<b>Cleft Lip/Palate and Related Craniofacial Anomalies</b> . . . . .	<b>313</b>
	Nature of the Problem . . . . .	313
	Cleft Lip and Palate . . . . .	313
	<i>Causation and Incidence</i> . . . . .	314
	<i>Speech Problems</i> . . . . .	316
	<i>Hearing Problems</i> . . . . .	317
	<i>Language Problems</i> . . . . .	318
	<i>Syndromes That Include Cleft Lip/Palate</i> . . . . .	318

Overview of Assessment in Cleft Lip and Palate . . . . .	320
<i>Assessing Speech Sound Production</i> . . . . .	321
<i>Voice and Resonance</i> . . . . .	321
<i>Language</i> . . . . .	322
In Medical Settings . . . . .	322
<i>Feeding</i> . . . . .	323
<i>Speech and Language Stimulation</i> . . . . .	324
<i>Speech and Language Assessment in Medical Settings</i> . . . . .	325
<i>Establishing and Monitoring Intervention Plans</i> . . . . .	326
In Educational Settings . . . . .	329
<i>Academic Problems</i> . . . . .	329
<i>Learning Problems in Children with Other Craniofacial</i> <i>Syndromes</i> . . . . .	331
Terms to Know . . . . .	334
Study Questions . . . . .	335
Bibliography . . . . .	335
<b>CHAPTER 12 Adult Language Disorders . . . . .</b>	<b>341</b>
The Aphasias . . . . .	341
Other Language Disorders . . . . .	346
<i>Right Hemisphere Impairment</i> . . . . .	346
<i>Language of Confusion</i> . . . . .	346
<i>Language of Generalized Intellectual Deterioration</i> . . . . .	347
Assessment of Adult Language . . . . .	347
<i>Case History Information</i> . . . . .	348
<i>Testing for Aphasia</i> . . . . .	348
<i>Right Hemisphere Assessment Issues</i> . . . . .	349
<i>Assessing Language of Confusion and of Dementia</i> . . . . .	350
Adult Language Treatment Principles . . . . .	350
Tips for Educational and Day Care Settings . . . . .	352
Tips for Allied Health Professions . . . . .	352
Terms to Know . . . . .	353
Study Questions . . . . .	354
Bibliography . . . . .	354
<b>CHAPTER 13 Specific Neurologically Based Impairments . . . . .</b>	<b>355</b>
The Nature of Neurologic Problems in Young Students . . . . .	356
<i>Cerebral Palsy</i> . . . . .	356
<i>Dysarthria</i> . . . . .	359
<i>Augmentative and Alternative Communication Modes</i> . . . . .	359
<i>Teacher Tips for Students with Neuromuscular Problems</i> . . . . .	363

The Nature of Neurologic Problems in Adults . . . . . 364  
*Dysarthrias and Apraxias* . . . . . 364  
*Assessment Issues* . . . . . 365  
*Treatment Issues* . . . . . 365  
*Tips for Healthcare Professionals Working with  
 Neurologically Impaired Adults* . . . . . 367  
*Overview of Swallowing Disorders* . . . . . 367  
 Students with Traumatic Brain Injury . . . . . 369  
*Teacher Tips for Students with TBI* . . . . . 372  
 Attention Deficit/Hyperactivity Disorder . . . . . 377  
*Prevalence* . . . . . 378  
*Accommodations to Help the Student with ADHD* . . . . . 382  
 Terms to Know . . . . . 385  
 Study Questions . . . . . 385  
 Bibliography . . . . . 386

**CHAPTER 14 Communication Disorders and Success: Academic,  
 Occupational, and Quality-of-Life Issues . . . . . 389**  
 Communication Disorders and Academic Success . . . . . 391  
*Students with Language Problems: The High-Risk Groups* . . . . 391  
 Curriculum and Teaching Impact on Students with  
 Language Problems . . . . . 398  
*The School Culture* . . . . . 399  
*Teacher Talk* . . . . . 401  
*Curriculum and Materials* . . . . . 402  
*Reading: A Language-Based Skill* . . . . . 404  
 Communication Disorders and Quality-of-Life Issues:  
 The Postschool Years . . . . . 406  
*Quality-of-Life Issues Following Glossectomy* . . . . . 407  
*Quality-of-Life Issues Associated with Hearing Loss* . . . . . 407  
*Quality of Life for Persons with Voice Disorders* . . . . . 410  
*Quality of Life for People Who Stutter* . . . . . 411  
*Quality of Life for Persons with Adult Language Disorders* . . . . 411  
*Quality of Life for Persons with Swallowing Disorders* . . . . . 412  
 Term to Know . . . . . 413  
 Study Questions . . . . . 413  
 Bibliography . . . . . 414  
**Glossary . . . . . 421**  
**Index . . . . . 445**



# PREFACE

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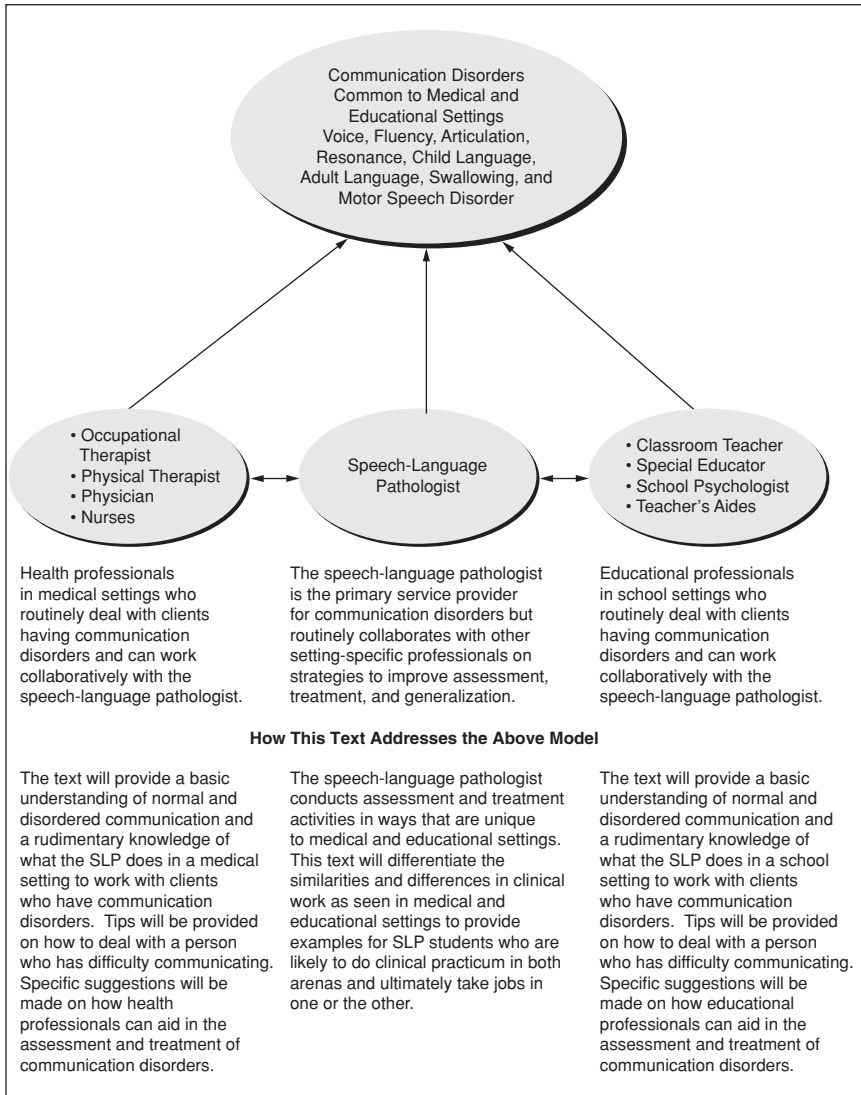
## **CONCEPTS UNDERLYING THE PRESENT TEXT AND TARGET AUDIENCES**

The discipline of communication disorders involves the two professions of audiology and speech-language pathology. Audiologists are involved in the assessment and rehabilitation of people who have hearing loss. Speech-language pathologists (SLPs) focus on the assessment and treatment of disorders affecting speech, language, voice, and swallowing. Both audiologists and SLPs serve as primary interventionists for communication disorders that affect children, adolescents, and adults.

Most introductory texts on communication disorders place heavy emphasis on speech-language pathology and devote only a single chapter to audiology. One reason for this is because training programs typically require students to take another course titled “Introduction to Audiology” in which hearing is the sole topic of consideration. This text is designed to be an introductory text for communication disorders as well as a text that could be used in the training of educational and health professionals. It is designed in the traditional way, with a single chapter on hearing disorders that provides treatment implications for speech-language pathologists, educators, and health professionals. Students interested in audiology as a potential career can find a general introduction in the present text that can then be elaborated in additional coursework on hearing disorders.

The two most common environments in which audiologists and SLPs provide services are educational settings (school systems) and medical settings (hospitals, rehabilitation centers, long-term care facilities, medical clinics). Educational professionals (classroom teachers, special educators, school psychologists, teaching assistants) in the school setting and health professionals (physicians, nurses, occupational therapists, physical therapists, nurses’ aides) in the medical/clinical environment frequently encounter communication disorders. As speech-language pathologists perform assessment and treatment activities

in educational and medical settings, they typically make an effort to collaborate with setting-specific professionals in providing services. These relationships are depicted in **Figure 1**. For example, classroom teachers and special educators can play a vital role in providing assessment information to the SLP and can also become involved in the treatment program to promote generalization of communication skills to the natural environment. Similarly, in medical settings, health professionals are in a position to provide critical



**FIGURE 1 Relationships among health professionals, speech-language pathologists, and educators in medical and educational settings.**

help in generalizing communication goals while the patient is receiving nursing care, physical therapy, or occupational therapy.

To collaborate in treatment or assessment activities, health and educational professionals must have a basic knowledge of the nature of various communication disorders and awareness of how they might play a role in the treatment process. Likewise, students in training to become speech-language pathologists must gain an appreciation of how their role is similar and different as they move from educational to medical settings and how to work with educational and health professionals. Thus, there are several important uses of this text:

1. The primary use of the book is as an introductory text in communication disorders that illustrates not only normal and disordered communication in children and adults but also how professionals deal with these disorders in school and medical settings.
2. Educators and health professionals can also use the text in training or in coursework on various disorders encountered in school and medical settings. Communication disorders are among the most frequently encountered problems in both school and medical environments. The text provides an introduction to normal and disordered communication in medical and educational settings. We make specific suggestions for health and educational professionals in terms of how to deal with clients with communication disorders and how to collaborate with the SLP in assessment and treatment.
3. The book is useful as a guide for the SLP in working with other professionals in school and medical environments because it includes practical suggestions for involvement of other professionals in the assessment and remediation processes.

**Table 1** shows an example of how the disorders of communication are both similar and different across medical/clinical and educational settings. The various chapters covering communication disorders are listed in the left column and the work settings and client populations are included in the next two columns. Chapters 1, 2, 3, and 7 address normal aspects of the field and the communication processes that are applicable to medical/clinical and educational work settings.

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## **OUR APPROACH TO PEDAGOGY**

The field of communication disorders, similar to many other disciplines, has undergone an information explosion in the past 25 years. Both the fields of speech-language pathology and audiology have experienced quantum leaps in technology and empirical research since the turn of the new century. These fields have embraced evidence-based practice that combines use of relevant research with clinical skills and the unique needs of patients. Now, more than ever before, training programs are straining to provide adequate coverage of all dimensions of communication sciences and disorders. Master's programs in speech-language pathology have been lengthened, and now a clinical doctorate is the required credential in the field of audiology. Students often report that it is a struggle to process all of the classroom information and learn the diverse clinical skills necessary for certification as a professional.

**TABLE 1 An Example of How the Various Disorders of Communication Are Seen in Educational and Medical Settings**

<b>Disorder</b>	<b>Educational Setting</b>	<b>Medical/Clinical Setting</b>
<i>Voice disorders</i> Chapter 9	Disorders of vocal fold mass and approximation, intensity, quality, pitch, and so forth in children and adolescents.	Disorders of vocal fold mass and approximation, intensity, quality, pitch, and so forth in adults. Adult disorders such as laryngectomy, vocal cord paralysis, spasmodic dysphonia, and hysterical aphonia are often seen in medical settings.
<i>Articulation disorders</i> Chapter 4	Developmental phonology disorders, articulation disorders.	Glossectomy, jaw and oral cancer.
<i>Motor speech disorders</i> Chapter 13	Dysarthrias seen in children with cerebral palsy and other conditions, developmental apraxia, apraxia of speech in brain-injured adolescents.	Dysarthrias and apraxia seen in postcerebrovascular accident (CVA) patients and in some degenerative diseases.
<i>Early child language disorders</i> Chapter 5	Disorders of syntax, semantics, morphology in preschool children. Autism and cognitive limitations in young children.	Working with neonatal ICU and families of high-risk children during the infant/toddler period.
<i>School-age, adolescent, and adult language disorders</i> Chapter 6 Chapter 12 Chapter 13 Chapter 14	Disorders of syntax, semantics, morphology, and pragmatics in older children/adolescents; literacy-based problems in school settings. Adolescents with traumatic brain injury and other brain injury exhibit problems with word retrieval, memory, executive function, and other difficulties seen in adults with brain injury.	Adults with aphasia, dementia, TBI, and degenerative neurologic conditions, and so forth.
<i>Fluency disorders</i> Chapter 8	Stuttering, cluttering seen in children and adolescents.	Fluency problems in adults associated with motor speech disorders, word finding difficulties, and language processing load. Adult stuttering.
<i>Swallowing disorders</i> Chapter 13	Children/adolescents with dysphagia as a product of neurologic conditions.	Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.
<i>Hearing impairments</i> Chapter 10	Children/adolescents with hearing impairment that is either congenital or acquired.	Adults with hearing impairment.
<i>Resonance disorders</i> Chapters 9 and 11	Children with clefts and other velopharyngeal problems.	Children with clefts seen by cleft palate teams. Adults with resonance disorders secondary to brain injury, surgery, or degenerative conditions.



In most training programs, students are initially exposed to the field of communication disorders in an introductory course. The goal of such a course is to provide an overview of basic processes of speech, hearing, and language and discuss common disorders that professionals deal with in communication disorders. After or concurrently with the introductory course, students take courses in the normal processes of speech, hearing, and language such as phonetics, speech and hearing science, anatomy and physiology, and introduction to audiology. The next step is completion of courses focusing on disorders of speech, hearing, and language that discuss in considerable detail the nature of each type of impairment and assessment and treatment approaches used in remediation. Then, on the graduate level, students also take even more advanced courses in all of the communication disorders and participate in extensive clinical practicum experiences.

As veteran instructors who have many years of experience introducing students to the field of communication disorders, we have observed several recurring issues:

- When students begin taking more focused courses in the field, we have found that they most often do not remember the specific terms they “learned” in the introductory course, mainly because concepts were introduced too quickly and superficially to facilitate recall. Our task in these later courses, then, becomes reintroducing the specifics of each disorder in earnest.
- We have noticed that colleagues teaching the introductory courses and using a very complex text often have to omit certain information to cover all relevant areas in a given semester. Thus, some students have the experience of being required to “know” certain information from the text for test purposes and are not responsible for other facts in preparation for an examination.
- The average semester has only about 40 class days of approximately one hour in which to cover material. If an instructor administers four 1-hour examinations during a semester, that reduces the number of teaching days to 36. Especially in introductory courses, instructors tend to show DVD presentations of the various disorders, and many of these videos are not specifically designed to be compatible with the introductory textbook. Thus, when you remove teaching time lost as a result of video presentations, there are precious few hours left to cover normal aspects of speech, hearing, and language plus all of the disorder areas. It is not unusual for instructors to have only two or three days to address a particular area of interest such as fluency disorders, articulation, anatomy, language disorders, or vocal disorders. The bottom line is that teaching opportunities are limited and the broad base of an introductory overview course makes it important that instructors cover material at a consistent depth that allows for understanding but that does not overload the student.

As a result of the preceding points, we saw the need to create an introductory textbook that covers all relevant areas, but that does so in a way so as not to overwhelm students. It is axiomatic that an introductory text should cover the *breadth* of a discipline to give students a sampling of its relevant components and a flavor for the duties of professional

practitioners. In a field as vast as communication disorders, it is a challenge to do justice even to the breadth of the field. And the real challenge concerns the *depth* at which each area is considered. Our solution is to attempt to control the depth in each section by limiting inclusion of more technical information that will be covered in later courses. We also make a conscious effort to minimize the use of references to the research literature that students will study in more specific coursework. We use references to support major points in the text without overwhelming students with a large bibliography.

This, of course, is a judgment call on the part of the present authors, but our goal is to have each chapter be similar in depth, creating an evenness of content throughout the book. Instructors can always add information if they deem it important for introductory students. This, in many ways, is more workable than telling students to ignore sections of a text that have provided too much depth for beginning students. We carefully considered the selection of information that is critical to an overview of the profession with the goals of keeping the text readable and not overwhelming students and instructors. Even this approach results in ample detail in all the areas of normal processes and disorders; students will find learning the material challenging but doable. Students can use the general foundation they develop in their introductory courses to build more in-depth knowledge in later courses in the training program.

No matter what a student's major or a reader's profession, he or she is still in the position of learning about communication sciences and disorders for the first time. We intend this text primarily for speech-language pathologists in training, and we also make the information accessible to professionals in education and allied health and anyone unfamiliar with this field. Whether you are an educator, health professional, or speech-language pathologist in training, we are certain that you will find this introduction to the field of communication disorders exciting, interesting, and relevant to your future work.